

Railway accident investigation report

Railway operator : East Japan Railway Company

Accident type : Train derailment.

Date and time : About 10:24, September 17, 2013.

Location : In the premises of Sagamiko station, Chuo Line, Sagamihara City, Kanagawa Prefecture.

SUMMARY

On September 17, 2013, while the outbound 831M train, composed of 10 vehicles, starting from Tokyo station bound for Otsuki station, Chuo Line of East Japan Railway Company, decelerating by the service brake to stop at Sagamiko station, the driver of the train noticed the train protection radio and the indicating warning in the monitor display on the operating console, just before the train stopped, and immediately applied an emergency brake to stop the train.

After the train had stopped, the driver was reported from the conductor that the rear end vehicle was contacting with platform of the down line, and checked the vehicle. It was found that all 2 axles in the front bogie of the most rear vehicle derailed to left and the body of the most rear vehicle had contacted with platform for the down line.

There were about 100 passengers, the train driver and 2 conductors onboard the train, but no one was injured.

PROBABLE CAUSES

It is probable that the accident occurred as the left wheel flanges in all axles of the front bogie of the most rear vehicle climbed up the outer rail, when the front bogie, in which the wheel load of right and left wheels was significantly unbalanced, was running at around rail joint in the intermediate transition curve, connecting the compound right curves from the 300 m radius curve with 105 mm cant, to the 500 m radius curve with 55 mm cant, and ran consecutively with the right wheels in the front bogie were preventing against derailment by the guard angle, derailed to left at the position beyond the end of the guard angle.

It is somewhat likely that the wheel loads of right and left wheels in the front bogie of the most rear vehicle were significantly unbalanced because the wheel load of the left wheel in the front bogie decreased according to increase in the wheel load of the diagonal right wheel of the front bogie as the body on the left side of the rear bogie was raised up, while the metal parts suspending the regulating rod of the automatic leveling valve, in the automatic leveling device of the air spring for the left side of the rear bogie, inclined and the regulating rod was raised up.

It is somewhat likely that lack of the fasten bolt, that caused tilting of the metal parts suspending the regulating rod, was related with the other accident with casualties occurred prior to this accident.